WHAT IS CLAIMED IS:

~~1.~~ A superconducting wire having a fine line of an oxide superconductor which has a metallic material therein, the outer periphery thereof being coated with a conductive material.

2. A superconducting wire according to Claim ~~1~~ 23, wherein said metallic material is silver or a silver alloy.

3. A superconducting wire according to Claim ~~1~~ 23, wherein said conductive material is a metal ~~or an alloy thereof~~ which is selected among Au, Al, Cu, Ni, Pd, Pt, Ti, Mo, W, Nb, and Mn.

~~4.~~ A superconducting wire according to any of Claims 1 to 3, wherein said oxide superconductor is composed of the materials represented by composition formula (I) given below:

$$Ln_aSr_bCu_{3-x}M_xO_c \quad \ldots \quad (I)$$

where Ln consists of at least one type of element or atomic group selected from the element group of Y element and lanthanoid element; M consists of at least one type of element or atomic group selected from the element group of Ti, V, Ga, Ge, Mo, W, and Re; and $2.7 \leq$

$a + b \leq 3.3$, $0.8 \leq a \leq 1.2$, $6 \leq c \leq 9$, and $0.05 \leq x \leq 0.7$.

5. A superconducting wire according to any of Claims 1 to 3, wherein said oxide superconductor is composed of the materials represented by composition formula (II) given below:

$$Ln_aCa_bSr_cCu_{3-x}M_xO_d \quad \ldots \quad (II)$$

where Ln consists of at least one type of element or atomic group selected from the element group of Y element and lanthanoid; M consists of at least one type of element or atomic group selected from the element group of Fe, Co, Ti, V, Ge, Mo, Re, and W; and $2.7 \leq a + b + c \leq 3.3$, $0.8 \leq a + b \leq 2.1$, $6 \leq d \leq 9$, $0.05 \leq b \leq 1.1$, and $0.05 \leq x \leq 1.0$.

6. A superconducting wire according to any of Claims 1 to 3, wherein said oxide superconductor is composed of the materials represented by composition formula (III) given below:

$$Ln_aCa_bSr_cBa_dCu_{2+e}O_{6+f}C_g \quad \ldots \quad (III)$$

where Ln consists of at least one type of element or atomic group selected from the element group of Y element and lanthanide element; and $a + b + c + d = 3$, $0.2 \leq a \leq 0.8$, $0.2 \leq b \leq 1.0$, $0.5 \leq c \leq 2.2$, $0 \leq d \leq$

1.6, $0 \leq e \leq 0.8$, $0 < f < 2$, and $0.2 \leq g \leq 1.0$.

7. A superconducting wire according to any of Claims 1 to 3, wherein said oxide superconductor is composed of the materials represented by composition formula (IV) given below:

$$(Ln_{1-a}Ca_a)(Sr_{2-b}Ba_b)(Cu_{3-c}B_c)O_d \quad \ldots \quad (IV)$$

where Ln consists of at least one type of element or atomic group selected from the element group of Y element and lanthanoid element excluding Ce and Tb; and $0.1 \leq a \leq 0.5$, $0.7 \leq b \leq 1.7$, $0.1 \leq c \leq 0.5$, and $6.5 \leq d \leq 7.5$.

8. A superconducting wire according to any of Claims 1 to 3, wherein said oxide superconductor is composed of the elements of Ln, M, Ba, Ti, Cu, and O; and the basic structure thereof is equipped with both an octahedron or a pyramid pentahedron formed by Cu and O and an octahedron formed by Ti and O, the octahedron or the pyramid pentahedron and the octahedron being arranged in a two-dimensional manner;

where Ln consists of at least one type of element or atomic group selected from the element group of Y, La, Pr, Nd, Sm, Eu, Gd, Dy, Ho, Er, Tm, Yb, and Lu; and M consists of at least one type of element or atomic

group selected from the element group of Ca and Sr.

9. A manufacturing method for a superconducting wire which has a fine line of an oxide superconductor comprising:

a process for forming a fine line by drawing a metal pipe filled with an oxide superconductor; and

a process for heating said fine line at a temperature which is higher than the melting point of a metal material constituting said metal pipe.

10. A manufacturing method for the superconducting wire according to Claim 9, wherein said metal pipe has a plurality of small holes.

11. A manufacturing method for the superconducting wire according to Claim 9, wherein said metal pipe is formed by wrapping an oxide superconductor with a metal tape.

12. A manufacturing method for the superconducting wire according to Claim 11, wherein said metal tape has a plurality of small holes.

13. A manufacturing method for the superconducting

wire according to any of Claims 9 to 12, wherein the outer periphery of said fine line is coated with a conductive material.

14. A manufacturing method for the superconducting wire according to any of Claims 9 to 12, wherein the process for heating said fine line has a step for letting said fine line pass through a melt of a conductive material having a melting point which is higher than that of a metal material constituting said metal pipe.

15. A manufacturing method for the superconducting wire which has a fine line of the oxide superconductor, comprising:

a process for forming the fine line by drawing a metal pipe filled with materials for the oxide superconductor;

a process for causing said materials to react so as to produce the oxide superconductor; and

a process for heating said metal pipe at a temperature which is higher than the melting point of the metal material constituting said metal pipe.

16. A manufacturing method for the superconducting

wire according to Claim 15, wherein said process for causing said materials to react so as to produce the oxide superconductor has a step for heating said materials to a reaction temperature before and after the process for forming said fine line.

17. A manufacturing method for the superconducting wire according to Claim 15, wherein said metal pipe has a plurality of small holes.

18. A manufacturing method for the superconducting wire according to Claim 15, wherein said metal pipe is formed by wrapping the materials for the oxide superconductor with the metal tape.

19. A manufacturing method for the superconducting wire according to Claim 18, wherein said metal tape has a plurality of small holes.

20. A manufacturing method for the superconducting wire according to any of Claims 15 to 19, further comprising a process for coating the outer periphery of said fine line with the conductive material.

21. A manufacturing method for the superconducting

wire according to any of Claims 15 to 19, wherein the process for heating said fine line has a step for letting said fine line pass through the melt of the conductive material having the melting point which is higher than that of the metal material constituting said metal pipe.